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EXAMINER

LAFORGIA, CHRISTIAN A

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/461,487

Applicant(s)

JUSTER, DORON

Examiner

Christian La Forgia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 11-15, 17, 18, 22-25 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 16, 19-21, 26-28 and 30-36 is/are rejected.
- 7) ☒ Claim(s) 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed on 08 September 2003 is noted and made of record.
2. Claims 1 through 36 are presented for examination.
3. Claims 11 through 15, 17, 18, 22 through 25, and 29 have been cancelled as per Applicant's request.

Response to Arguments

4. Applicant's arguments with respect to claims 1 through 29 have been considered but are moot in view of the new ground(s) of rejection.

See further rejections that follow.

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 30, 31, and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,249,801 to Zisapel et al., hereinafter Zisapel.
7. As per claim 30, Zisapel teaches a method for a server, the method comprising:
receiving a request from a client (Figures 1a [blocks 22, 28], 1c [block 28], 2a; column 2, lines 15-19; column 5, lines 21-28; column 6, lines 32-39);
determining whether the request can be fulfilled locally (Figure 2a [block 54], 2b [block 56], 2e [block 54], 2f [block 54]; column 6, lines 32-39; column 6, line 50 to column 7, line 16);
and
if the request cannot be fulfilled locally, handling the request according to characteristics of the client (column 6, lines 40-55; claim 1). A determining client factor is the client's

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proximity to the various load balancing servers and a determination that is made as to which load balancer is closest and best suited to handle the client's request and forwarding the request to best available server.

8. As per claim 31, Zisapel teaches a method for enabling non-delegable clients to exist in a client-server architecture having servers that do not maintain enterprise-wide directory service-related information, the method comprising:

providing each of the servers in the client-server architecture with computer-implemented instructions enabling the server to determine characteristics of a client from which the server receives a request (column 6, lines 40-55); and

responding to the client by determining whether the request can be fulfilled (Figure 1c [block 40]; column 6, lines 7-13; column 6, lines 40-55); and

if the request cannot be fulfilled, responding according to the characteristics of the client (column 6, lines 40-55; column 7, lines 36-52).

9. Regarding claim 32, Zisapel teaches wherein the characteristics of the client include whether the client is of a type that allows for delegation (column 7, lines 36-52).

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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11. Claims 1, 6, 19, 20, 21, and 33 through 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zisapel in view of U.S. Patent No. 6,389,448 to Primak et al., hereinafter Primak.

12. As per claim 1, Zisapel teaches a computer-implemented method for an on-line server responsive to a client, the method comprising:

receiving a request from the client, the server being chosen from a list of servers available to the client (Figures 1a [blocks 22, 28], 1c [block 28], 2a; column 2, lines 15-19; column 5, lines 21-28; column 6, lines 32-39);

determining whether the server is inappropriate to fulfill the request based on characteristics of the client (Figure 2a [block 54], 2b [block 56], 2e [block 54], 2f [block 54]; column 6, lines 32-39; column 6, line 50 to column 7, line 16);

13. Zisapel does not teach:

if the server determines that the server is inappropriate to fulfill the request, sending an error message to the client, the error message identifying the server as being off-line to enable the client to send the request to a next server on the list of servers.

14. Primak teaches:

if the server determines that the server is inappropriate to fulfill the request, sending an error message to the client, the error message identifying the server as being off-line to enable the client to send the request to a next server on the list of servers (Figures 2a, 2b, 5, 6; column 4, lines 7-39). A characteristic of the client is their proximity to the various load balancing servers and a determination that is made as to which load balancer is closest and best suited to handle the client's request. Zisapel discusses several methods of polling servers to determine their

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availability, column 3, lines 21-33. Primak discloses a method of returning an availability message to the client. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a message that indicates that a server is unavailable because it would aid the client in finding a server that could handle its requests.

15. As per claim 6, Zisapel teaches a machine-readable medium having instructions stored thereon for execution by a processor of a client to perform a method comprising:

 sending a request to a server, the server being chosen from a list of servers available to the client (Figures 1a [blocks 22, 28], 1c [block 28], 2a; column 2, lines 15-19; column 5, lines 21-28; column 6, lines 32-39);

 receiving a response to the request from the server (Figure 1c [block 40]; column 6, lines 7-13).

16. Zisapel does not teach:

 upon determining that the response comprises an error message that the server is off-line, even though the server is online, when the server is inappropriate to fulfill the request, automatically repeating the sending of the request to a next server of the list until the error message is not received.

17. Primak teaches:

 upon determining that the response comprises an error message that the server is off-line, even though the server is online, when the server is inappropriate to fulfill the request, automatically repeating the sending of the request to a next server of the list until the error message is not received (Figures 1 [block 30], 2a [block 30], 2b [blocks 20 & 30], & 5; column

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3, lines 29-48; column 4, lines 27-39). A characteristic of the client is their proximity to the various load balancing servers and a determination that is made as to which load balancer is closest and best suited to handle the client's request. Zisapel discusses several methods of polling servers to determine their availability, column 3, lines 21-33. Primak discloses a method of returning an availability message to the client. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a message that indicates that a server is unavailable because it would aid the client in finding a server that could handle its requests.

18. As per claim 19, Zisapel teaches a machine-readable medium having instructions stored thereon for execution by a processor of a server to perform a method comprising:

receiving a request from a client (Figures 1a [blocks 22, 28], 1c [block 28], 2a; column 2, lines 15-19; column 5, lines 21-28; column 6, lines 32-39);

determining whether the server is inappropriate to fulfill the request (Figure 2a [block 54], 2b [block 56], 2e [block 54], 2f [block 54]; column 6, lines 32-39; column 6, line 50 to column 7, line 16);

determining whether the client is non-delegable (column 6, lines 40-59).

19. Zisapel does teach:

upon determining that the server is inappropriate to fulfill the request due to the client being non-delegable such that the client would not understand a delegation of the request to another server, sending an error message to the client that causes the client to forward the request to an alternative server

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20. Primak teaches:

upon determining that the server is inappropriate to fulfill the request due to the client being non-delegable such that the client would not understand a delegation of the request to another server, sending an error message to the client that causes the client to forward the request to an alternative server (Figures 1 [block 30], 2a [block 30], 2b [blocks 20 & 30], & 5; column 3, lines 29-48; column 4, lines 27-39). Zisapel discusses passing off a client request to another server, but does not disclose how to handle clients that cannot be delegated to another server. Primak discloses a method of returning an availability message to the client. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a message that indicates that a server is unavailable because it would aid the client in finding a server that could handle its requests if it cannot be forward to another server by the server it is currently requesting a resource from.

21. With regards to claim 20, Primak teaches the method further comprising:

determining whether the client is of a type capable of understanding a delegation of the request (Figures 1 [block 30], 2a [block 30], 2b [blocks 20 & 30], & 5; column 3, lines 29-48; column 4, lines 27-39);

upon determining that the server is inappropriate to fulfill the request and that the client is of the type capable of understanding a delegation, delegating the request to another server (Figures 1 [block 30], 2a [block 30], 2b [blocks 20 & 30], & 5; column 3, lines 29-48; column 4, lines 27-39).

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22. Regarding claim 21, Primak teaches the method further comprising upon determining that the server is appropriate to fulfill the request, fulfilling the request (Figures 1 [block 30], 2a [block 30], 2b [blocks 20 & 30], & 5; column 3, lines 29-48; column 4, lines 27-39).

23. With regards to claim 33, Zisapel does not teach wherein the server returns an indication that the server cannot satisfy the request by sending an error message that results in the client determining that the server is unavailable to receive the request.

24. Primak teaches wherein the server returns an indication that the server cannot satisfy the request by sending an error message that results in the client determining that the server is unavailable to receive the request (Figures 1 [block 30], 2a [block 30], 2b [blocks 20 & 30], & 5; column 3, lines 29-48; column 4, lines 27-39). Zisapel discusses passing off a client request to another server, but does not disclose how to handle clients that cannot be delegated to another server. Primak discloses a method of returning an availability message to the client. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a message that indicates that a server is unavailable because it would aid the client in finding a server that could handle its requests if it cannot be forward to another server by the server it is currently requesting a resource from.

25. As per claim 34, Zisapel teaches a server computer comprising:

a communications device (column 5, lines 13-28); and,

a computer program with computer-implemented instructions enabling the server computer to perform determining characteristics of a client from which the server receives a

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request (Figure 2a [block 54], 2b [block 56], 2e [block 54], 2f [block 54]; column 6, lines 32-39; column 6, line 50 to column 7, line 16); and

responding to the client by determining whether the request can be fulfilled (Figure 1c [block 40]; column 6, lines 7-13; column 6, lines 40-55).

26. Zisapel does not teach if the request cannot be fulfilled, responding according to the characteristics of the client by providing that the communications device send an error message to the client that will cause the client to send the request to an alternative server computer even if the client is non-delegable.

27. Primak teaches if the request cannot be fulfilled, responding according to the characteristics of the client by providing that the communications device send an error message to the client that will cause the client to send the request to an alternative server computer even if the client is non-delegable (Figures 1 [block 30], 2a [block 30], 2b [blocks 20 & 30], & 5; column 3, lines 29-48; column 4, lines 27-39). Zisapel discusses passing off a client request to another server, but does not disclose how to handle clients that cannot be delegated to another server. Primak discloses a method of returning an availability message to the client. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a message that indicates that a server is unavailable because it would aid the client in finding a server that could handle its requests if it cannot be forward to another server by the server it is currently requesting a resource from.

28. Regarding claim 35, Zisapel teaches wherein the computer program is further designed to delegate the request to another server computer via the communications device in response to a

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request from a client of a second predetermined type when the server computer is inappropriate to fulfill the request (column 7, lines 36-52).

29. Regarding claim 36, Zisapel teaches wherein the computer program is further designed to fulfill the request when the server computer is appropriate to fulfill the request (column 6, lines 40-49).

30. Claims 2, 3, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zisapel in view of Primak as applied to claim 1 above, and further in view of United States Patent No. 5,535,322 to Hecht.

31. Regarding claim 2 and 7, Zisapel and Primak do not teach wherein receiving the request from the client comprises generating the request at a queue manager of the client.

32. Hecht teaches wherein receiving the request from the client comprises generating the request at a queue manager of the client (Abstract; Figure 4; column 8, lines 34-54). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to include queue manager of Hecht with the combined system of Zisapel and Primak, because it would enable a quicker and more efficient way to find an appropriate server to service the client's request. One would be motivated to combine the queue manager with the combined system of Zisapel and Primak because it would assist outgoing and incoming requests without slowing down the system.

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33. With regards to claims 3 and 8, Zisapel and Primak do not teach wherein receiving the request from the client receives the request from the queue manager at an application programming interface (API) of the client.

34. Hecht teaches wherein receiving the request from the client receives the request from the queue manager at an application programming interface (API) of the client (Figures 10 & 11; column 15, lines 33-47). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include the API of Hecht with the combined system of Zisapel and Primak, because it would enable a quicker and more efficient way to manage the various client's requests. One would be motivated to combine the APIs of Hecht with the combined system of Zisapel and Primak because they offer an interface to better manage incoming and outgoing requests, instead of having the system manage the requests in the background.

35. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zisapel in view of Primak as applied to claim 3 above, and further Hecht in view of U.S. Patent No. 5,884,301 to Takano.

36. Concerning claims 4 and 9, Zisapel, Primak, and Hecht do not teach wherein the request from the client is received from the API at a component of the client that maintains the list of servers.

37. Takano teaches wherein the request from the client is received from the API at a component of the client that maintains the list of servers (Figures 2, 3, 4, & 5; column 4, lines 1-10; column 4, line 65 to column 5, line 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the delegation means of Takano with the

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combined system Zisapel, Primak, and Hecht, because it would enable a quicker means to resolve which server should respond to the client's request. One would be motivated to combine the delegation of Takano with the current system because it encourages the servers to communicate and be knowledgeable of the servers around them.

38. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zisapel in view of Primak as applied to claim 1 above, and further in view of U.S. Patent No. 5,617,570 to Russell et al., hereinafter Russell.

39. Regarding claims 5 and 10, Zisapel and Primak do not teach wherein sending the request from the client further comprises sending the request using a remote procedure call of the client.

40. Russell teaches wherein sending the request from the client further comprises sending the request using a remote procedure call of the client (Abstract; column 3, lines 53-65). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include the remote procedure calls of Russell with the combined system of Zisapel and Primak, because it would enable a quicker and more efficient way for client's requests to be passed off to the appropriate server.

41. Claims 16, 26, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Primak.

42. As per claim 16, Primak teaches a client computer comprising:

a communications device (Figures 1 [block 30], 2a [block 30], 2b [block 30], 3 [block 30]; column 3, lines 29-48); and,

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a computer program designed to automatically repeat sending a request to a different server of a list of servers via the communications device, the automatic repeat sending each time an error message is received indicating that a server is offline, the off-line error message received from on-line servers that determine that the client computer is incapable of receiving delegated responses to requests and from servers that are off-line (Figures 1 [block 30], 2a [block 30], 2b [blocks 20 & 30], & 5; column 3, lines 29-48; column 4, lines 27-39). Primak does not teach wherein the off-line message is sent from on-line servers when a server determines that a client is non-delegable. Primak teaches returning an availability message to the client. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the availability message of Primak to an off-line message when it is determined that the client is non-delegable. One would be motivated to modify the availability message to an off-line away message in order to convey to the client that the requested server cannot handle its request nor pass that request off to someone who could handle the request.

43. As per claim 26, Primak teaches a machine-readable medium having instructions stored thereon for execution by a processor to transform a general purpose computer to a special purpose computer comprising:

a communication device (Figures 1 [block 30], 2a [block 30], 2b [block 30], 3 [block 30]; column 3, lines 29-48);

means for sending via the communications device an error message that a computer is off-line in response to a request from a non-delegable client that does not understand a delegation of the request to another server when the computer is on-line but is inappropriate to

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fulfill the request (Figures 1 [block 30], 2a [block 30], 2b [blocks 20 & 30], & 5; column 3, lines 29-48; column 4, lines 27-39). Primak does not teach wherein the off-line message is sent from on-line servers when a server determines that a client is non-delegable. Primak teaches returning an availability message to the client. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the availability message of Primak to an off-line message when it is determined that the client is non-delegable. One would be motivated to modify the availability message to an off-line away message in order to convey to the client that the requested server cannot handle its request nor pass that request off to someone who could handle the request.

44. Regarding claim 27, Primak teaches wherein the means is further for delegating the request to another computer via the communications device in response to a request from a client of a second predetermined type when the computer is inappropriate to fulfill the request (Figures 1 [block 30], 2a [block 30], 2b [blocks 20 & 30], & 5; column 3, lines 29-48; column 4, lines 27-39).

45. With regards to claim 28, Primak teaches wherein the means is further for fulfilling the request when the computer is appropriate to fulfill the request (Figures 1 [block 30], 2a [block 30], 2b [blocks 20 & 30], & 5; column 3, lines 29-48; column 4, lines 27-39).

Claim Objections

46. Claim 33 is objected to because of the following informalities: it is dependent upon itself. Appropriate correction is required.

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Conclusion

47. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

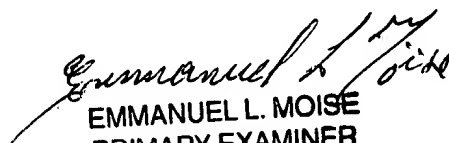
48. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

49. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (703) 305-7704. The examiner can normally be reached on Monday thru Thursday 7-5.

50. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7240.

51. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Christian LaForgia
Patent Examiner
Art Unit 2131
clf


EMMANUEL L. MOISE
PRIMARY EXAMINER
A/U 2136